



Declaration by Georg Spilger

My name is Georg Spilger. I reside at Fahrenbacherstraße 49, 64668 Rimbach, Germany. My professional experience with respect to injection molding of plastic materials is as follows: I studied material science of plastic materials at the university of applied sciences in Darmstadt/Germany and received the title "Dipl.-Ing.". I have been employed at CORONET GMBH since July 1, 1976 and I have been working as the head of production of plastic material from January 1, 1980 till September 30, 2005. I assisted the inventor to US patent application 10/500 970, Mr. Weihrauch, and performed experiments in injection molding. I know the contents of the amended patent claim.

I declare the following:

Someone skilled in the art of injection molding knows, that the injection pressure must be chosen in such a way that one can be sure that the entire mold cavity is filled upon injection.

According to the United States Patent Application 10/500,970 of Georg Weihrauch and his invention disclosed therein, the injection pressure is, as a fact, much higher than the pressure necessary to fill the cavity, and is correspondingly also much higher than the injection pressure according to the prior art.

There is a difference between the injection pressure and the resultant pressure within the bristle-molding channels.

Such injection pressure must be at least 300 bar as disclosed in the above-identified U.S. patent application in several locations, and such injection pressure must in turn produce a specific pressure within the bristle-molding channels which is more than 300 bar as recited in the original claim 4. If the injection pressure is set to 2000 bar or more as recited in the original claim 3 and the presently pending claims, the specific pressure in the bristle-molding channel will be substantially more than 300 bar, which is fully consistent with the invention of U.S. patent application 10/500,970.

The spirit of the invention of U.S. patent application 10/500,970 resides in selecting an injection pressure which is much higher than that required to fill the mold cavity. Someone skilled in the art would likely and usually use only the maximum pressure to fill the mold cavity, because selecting a greater pressure would be more expensive. In order to fill the mold cavity, the injection pressure needs to be only about 300 bar, far less than the injection pressure used in the invention of the Weihrauch U.S. patent application 10/500,970, and far less than that which will result in a specific pressure within the bristle-molding channels of more than 300 bar.

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The Weihrauch invention of U.S. patent application 10/500,970 requires an injection pressure far greater than the injection pressure of about 300 bar necessary to fill the mold cavity, namely an injection pressure of more than 500 bar as recited in original claim 2, and sufficiently great to provide a high speed of 300mm/s in the core of the liquid plastic material, providing a specific pressure within the bristle-molding channel of substantially more than 300 bar. Proceeding in this manner provides bristles having a greater strength than bristles produced according to conventional practice wherein the injection pressure is only about 300 bar.

I hereby declare under penalty of perjury under the laws of the United States of America that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and imprisonment, or both, under §1001 of Title 18 of the United States code, and that such willful false statements may jeopardize the validity of the present application or any patent issuing thereon.

Rimbach, on October 30, 2006

Dipl.-Ing. Georg Spilger
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